REMARKS

Claims 1 and 15-37 are pending in the application and stand rejected. In the present Office Action, claims 1 and 26 have been amended and claims 36 and 37 have been added to further define the invention. Applicant respectfully requests reconsideration of the claim rejections based on the above amendments and the following remarks.

Claim Rejections

1. Claims 1, 15, and 18-35 are rejected under 35 U.S.C. § 112, second paragraph, for the reasons stated on page 2 of the Office Action.

Claim 1 has been amended in such a manner believed to obviate Examiner's rejection above.

Accordingly, withdrawal of the claim rejection pursuant to 35 U.S.C. § 112, second paragraph, is respectfully requested.

2. Claims 1, 15, and 18-35 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Mackenzie (U.S. Patent 2,042,347) in view of Tittle (U.S. Patent 4,886,590) (hereinafter "Tittle '590") and further in view of Tittle et al. (U.S. Patent 4,950,610) (hereinafter "Tittle '610").

It is respectfully submitted that neither Mackenzie, Tittle ' 590 nor Tittle '610, singularly or in combination, disclose or suggest a process for the automatic determination of the alkalinity of one or more cleaning baths containing a surfactant comprising, *inter alia,* "(b) determining alkalinity of the sample using an acid-base reaction with an acid, the determining step being performed by a measuring device...and...adding one or more replenishing components to the cleaning bath if the result of step (b) is below a preset value" as generally recited in Claim 1.

As correctly noted by the Examiner on page 3 of the Office Action, Mackenzie is silent with respect to the automation of a process. Accordingly, Mackenzie does not disclose or suggest the steps of Claim 1 recited above. More particularly, Mackenzie does not disclose or suggest, at the very least, "(b) determining alkalinity of the sample using an acid-base reaction with an acid, the determining step being performed by a measuring device...and...adding one or more replenishing components to the cleaning bath if the result of step (b) is below a preset value" as generally recited in Claim 1.

The Examiner attempts to cure the deficiencies of Mackenzie by stating that the utilization of automated chemical process and control systems and methods are well known in the art as evidenced by Tittle '590. In addition, the Examiner contends that Tittle '590 teaches an automated chemical process control system and process in which a cleaning bath composition is monitored and controlled utilizing a titration apparatus.

However, although Tittle '590 may disclose an automated process, Tittle '590 discloses a microprocessor-based apparatus that monitors acidity or residual etching capacity (i.e., the total acidity) of a bath using titration (see column 4, lines 57-63). In other words, the primary goal of Tittle '590 is to monitor acidity or the total acidity of a bath using titration and not to determine the alkalinity of a cleaning bath using an acid-base reaction with an acid, wherein the determining step is performed by a measuring device, and one or more replenishing components are added to the cleaning bath if the determined alkalinity is below a preset value, as generally recited in Claim 1. Thus, it is not seen where Tittle '590 provides any suggestion or motivation for features of Claim 1 discussed above. Accordingly, Tittle '590 fails to cure the deficiencies of Mackenzie.

It is also stated on page 3 of the Office Action that Tittle '610 is incorporated by reference in Tittle '590, and Tittle '610 teaches that a titration apparatus and an associated method using the titration apparatus as well as other items.

It is respectfully submitted that Tittle '610 does not cure the deficiencies of Mackenzie and Tittle '590. In particular, nowhere does Tittle '610 disclose or suggest a process for the automatic determination of the alkalinity of one or more cleaning baths containing a surfactant comprising, *inter alia,* determining alkalinity of a sample using an acid-base reaction with an acid, wherein the determining step is performed by a measuring device ... and ... adding one or more replenishing components to the cleaning bath if the result of the determined alkalinity is below a preset value, as generally recited in Claim 1.

Rather, Tittle '610 merely discloses a titration apparatus and method. Indeed, there is no suggestion, motivation, or even a hint in Title '610 of the specifically recited steps of determining alkalinity of a sample using an acid-base reaction with an acid, wherein the determining step is performed by a measuring device ... and ... adding one or more replenishing components to the cleaning bath if the result of the determined alkalinity is below a preset value in a process for the automatic determination of the alkalinity of a cleaning bath containing a surfactant, as essentially set forth in Claim 1.

Accordingly, the steps of the present process, as set forth in the present claims, employs a procedure which starts itself automatically and subsequently makes a decision based on the result of the alkalinity determination to decide independently from any human interaction if and to what extent a replenishment of replenishing components should be added to the cleaning bath. There is no remote suggestion, motivation or even a hint in Tittle '610 of employing these steps

in an automated process as essentially set forth in Claim 1. Thus, nothing in Tittle '610 would lead one skilled in the art to modify the process of Mackenzie and Tittle '590 to arrive at the presently claimed process with any expectation of success.

It is also stated on pages 3 –4 of the Office Action that the Courts have held that to provide a mechanical or automatic means to replace manual activity, which accomplishes the same result, is within the ambit of a person of ordinary skill in the art. See *In re Venner*, 120 USPQ 192 (CCPA 1958). Furthermore, Tittle '610 does disclose the benefits of using an automated titration system and method (See Col. 1, lines 1-46). Therefore, it would have been obvious to a person of ordinary skill in the art to provide an automated chemical process and control system and associated methodology to perform the claimed method as recited in Claims 1, 18 & 35.

However, as the court pointed out in *In re Lee*, 277 F.3d 1338, 1342-43, 61 USPQ2d 1430, 1433-34 (CAFC 2002), there must be some teaching, motivation or suggestion to select and combine references relied upon as evidence of obviousness. As is the case here, Tittle '610 provides no such teaching, motivation or even a suggestion of the steps of determining the alkalinity of a sample using an acid-base reaction with an acid, wherein the determining step is performed by a measuring device...and...adding one or more replenishing components to the cleaning bath if the result of the determined alkalinity is below a preset valve in an automatic process for the determination of the alkalinity of one or more cleaning baths containing a surfactant as essentially set forth in the present claims.

As previously discussed hereinabove, Tittle '590 is directed to a microprocessor-based apparatus that monitors acidity or residual etching capacity, and Tittle '610 is directed to a

titration apparatus. At no point does either Tittle '590 or Tittle '610, singularly or in combination, provide any such suggestion, motivation or even a hint of an automatic determination of the alkalinity of one or more cleaning baths containing a surfactant and replenishing said bath as necessary by determining alkalinity of the sample using an acid-base reaction with an acid and adding one or more replenishing components to the cleaning bath if the result of the alkalinity determination is below a preset value as set forth in the present claims. As such, one skilled in the art would not be motivated by Tittle '610 to modify the process of Tittle '590 and Mackenzie and arrive at the presently claimed process with any expectation of success.

Since Mackenzie, alone or in combination with Tittle '590 and Tittle '610, does not disclose or suggest a process for the automatic determination of the alkalinity of one or more cleaning baths containing a surfactant under program control, comprising the steps of, *inter alia*, determining alkalinity of the sample using an acid-base reaction with an acid, wherein the determining step is performed by a measuring device...and...adding one or more replenishing components to the cleaning bath if the result of the alkalinity determination is below a preset value as generally recited in Claim 1, Claim 1 is believed to be nonobvious, and therefore patentable, over Mackenzie, Tittle '590 and Tittle '610.

Claims 15, 18-25 and 27-35 depend, directly or indirectly, from Claim 1. As such, these claims are believed to be allowable for at least the same reasons as given above for Claim 1.

These dependent claims are believed to be allowable for additional reasons. For instance, Claim 25 recites, *inter alia,* determining the alkalinity of one or more standard solutions. The Office Action asserts that it is inherently anticipated that the standard solutions utilized in the titration process would be either given or determined before implementing the titration process.

It is respectfully submitted that including a standard solution in a titration process does not equate to determining the alkalinity of one or more standard solutions as generally recited in Claim 25. Indeed, nowhere in either Mackenzie, Tittle '590 or Tittle '610 is such a feature disclosed or suggested. Furthermore, if it is the Examiner's position that Mackenzie, Tittle '590 or Tittle '610, singularly or in combination, does disclose or suggest such features of Claim 25, the Examiner is respectfully requested to identify with particularity (i.e., by column and line number) wherein Mackenzie, Tittle '590 or Tittle '610 such features can be found. Moreover, if Examiner is relying on personal knowledge, the Examiner is respectfully requested to provide an affidavit to support such a contention (See 37 C.F.R. § 1.104). Therefore, Claim 25 is believed to be nonobvious, and therefore patentable, over the combination of Mackenzie, Tittle '590 and Tittle '610.

With respect to Claim 26, Claim 26 has been amended by substantially incorporating the subject matter of Claims 1 and 25. Accordingly, Claim 26 is believed to be allowable for at least the same reasons as given above for Claims 1 and 25.

Further, amended Claim 26 includes, *inter alia,* the step of "determining the alkalinity of one or more standard solutions is initiated if the results of step (b) on two consecutive drawn samples differs by a preselected value."

The Office Action asserts that it is inherently anticipated that the standard solutions utilized in the titration process would be either given or determined before implementing the titration process.

It is respectfully submitted that the presence of a standard solution in a titration process does not equate to determining the alkalinity of one or more standard solutions, much less

determining the alkalinity of one or more standard solutions if the results of determining alkalinity of a sample on two consecutive drawn samples differs by a preselected value, as generally recited in Claim 26. Indeed, nowhere in Mackenzie, Tittle '590 or '610 is the features of Claim 26 disclosed or suggested. Furthermore, if it is the Examiner's position that Mackenzie, Tittle '590 or Tittle '610, singularly or in combination, does disclose or suggest such features of Claim 26, the Examiner is respectfully requested to identify with particularity (i.e., by column and line number) wherein Mackenzie, Tittle '590 or Tittle '610 such features can be found. Moreover, if Examiner is relying on personal knowledge, the Examiner is respectfully requested to provide an affidavit to support such a contention (See 37 C.F.R. § 1.104). Therefore, Claim 26 is believed to be nonobvious, and therefore patentable, over the combination Mackenzie, Tittle '590 and Tittle '610.

3. Claims 16 and 17 are rejected under 35 U.S.C. §103(a) as being unpatentable over Mackenzie and Tittle '590 in view of Tittle '610, as applied to claims 1 and 15-35 above, and further in view of Rolchigo et al (US Patent No. 5,820,690).

The above rejections are based, in part, on the contention that the combination of Mackenzie, Tittle '590 and Tittle '610 discloses the elements of Claim 1. However, since Claim 1 is patentably distinct from the combination of Mackenzie, Tittle '590 and Tittle '610 as described above, the above combination is legally deficient to establish a prima facie case of obviousness because the combination does not disclose or suggest all of the claim elements.

In addition, it is respectfully submitted that Rolchigo does not cure the deficiencies of Mackenzie, Tittle '590 and Tittle '610. More particularly, nowhere does Rolchigo disclose or suggest a process for the automatic determination of alkalinity of one or more cleaning baths

employing, *inter alia,* the steps of determining alkalinity of the sample using an acid-base reaction with an acid, wherein the determining step is performed by a measuring device...and ... adding one or more replenishing components to the cleaning bath if the result of the alkalinity determination is below a preset value as generally claimed in claim 1.

Rather, Rolchigo discloses a cleaning process to remove soil using cleaners exhibiting cloud point behavior. Although Rolchigo may disclose "the use of titration in determining free and total alkalinity in determining cleaner activity" (see page 5 of the Office Action), at no point is it seen where Rolchigo provides any suggestion, motivation or even a hint of determining alkalinity of the sample using an acid-base reaction with an acid, wherein the determining step is performed by a measuring device...and...adding one or more replenishing components to the cleaning bath if the result of the alkalinity determination is below a preset value. Thus, Rolchigo does not cure the deficiencies of Mackenzie, Tittle '590 and Tittle '610.

Accordingly, Claims 16 and 17 are believed to nonobvious, and therefore patentable, over Mackenzie and Tittle '590 in view of Tittle '610 and in further view of Rolchigo.

Reconsideration and withdrawal of the rejection under 35 U.S.C. § 103 is respectfully requested.

The New Claims

New claims 36 and 37 are added herein. Claim 36 is independent and is directed to a process for automatic determination of cleaning baths containing surfactant. Claim 37 depends from claim 36. Both of these claims are submitted to be allowable over the art of record.

CONCLUSION

In view of the foregoing remarks, it is respectfully submitted that all the claims now pending in the application are in condition for allowance. Early and favorable reconsideration of the case is respectfully requested.

Respectfully submitted,

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